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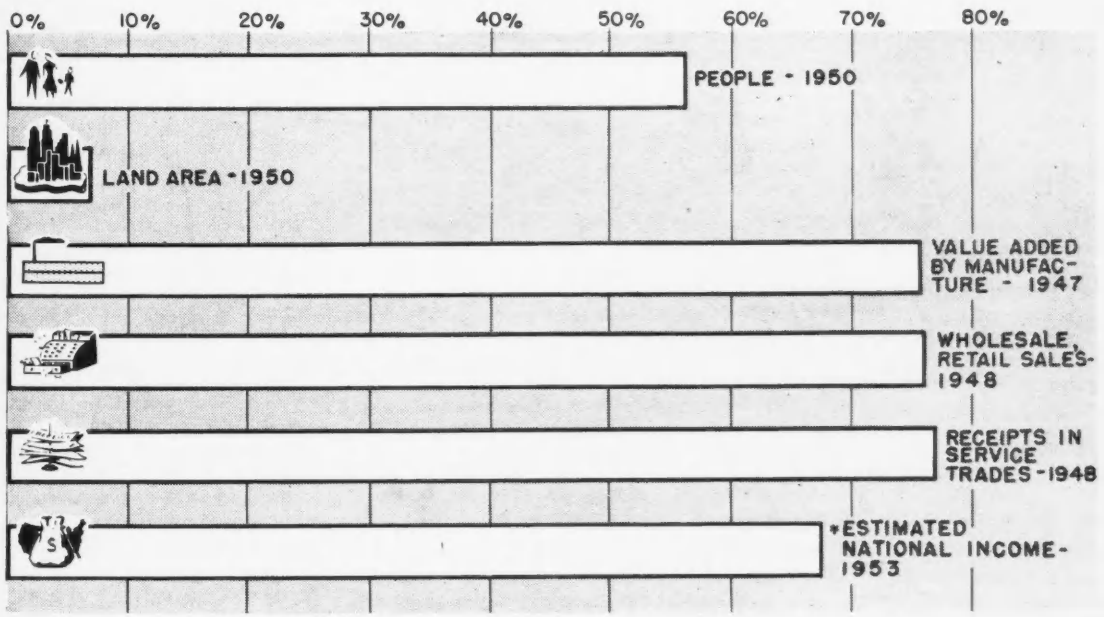
CENSUS IMPROVEMENTS NEEDED FOR URBAN RESEARCH

by

Henry Cohen, Senior Management Consultant, Division of Administration, Office of the Mayor, New York City



Source: County and City Data Book—1952. * Department of City Planning, City of New York

SELECTED DATA ON THE 170 STANDARD METROPOLITAN AREAS AS A PERCENTAGE OF TOTAL UNITED STATES

Editor's Note

On numerous occasions, URBAN LAND has called attention to the need for impartial factual information on our growing urban areas which can be used with confidence by those concerned with *planning* for, *investment* in and *development* of urban land.

At the Federal level, we have felt that the U. S. Bureau of the Census is the proper agency to perform this function, but that there was need for improvement in the extent and quality of census data.

In the following pages we feel this need has been made quite evident by Mr. Henry Cohen, Senior Management Consultant, Division of Administration, Office of the Mayor, New York City. Based upon a paper originally presented to the American Statistical Association at its annual meeting in Montreal in 1954, the author's article contains a great deal of factual information for both the business man and the professional who has a financial stake or a technical interest in the American city. Mr. Cohen until recently was Director of Research, Department of City Planning, New York City. (*The article begins on page 4.*)

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Plan-itorial . . .

The Community Facility Problem

A Challenge in Cooperation

The November issue of Urban Land carried an item on page two which discussed briefly the growing problem of providing community facilities in suburban areas and the fact that the National Association of Home Builders was giving attention to finding solutions to the problem. At about the same time an article appeared in the November News Letter of the American Municipal Association to the effect that NAHB was setting up a program to break down subdivision and zoning regulations throughout the nation. This article was reprinted in the News Letter of the American Society of Planning Officials. As can well be imagined, AMA's article and the ASPO reprint created consternation in municipal, planning, and homebuilding circles. As a result, ULI received numerous inquiries from all over the country: "Is this true?"; "What is the position of ULI?"

We were aware that no such position had been taken by NAHB, nor at that time had any official policy been adopted on the problem.

Subsequent events have clearly shown that the AMA article represented neither a true statement of the facts nor the official position of either AMA or NAHB. Policy by the NAHB was established during the Home Builders' Convention in Chicago in January and is reflected in the following official statement of NAHB's Board of Directors:

"FACILITIES FOR AN EXPANDING AMERICA"

"The pressure of increasing population—not new home building—makes inevitable expansion of suburban communities. We face increasing shortages of land suitable for development, properly zoned and adequately served by facilities needed for modern living—good schools, sewer and water, roads, play areas—particularly for moderate priced housing needed for so many American families.

"We recognize the need for and will support sound planning, zoning and sub-division regulations. We urge on those responsible for preparing and administering such regulations that they devise provisions related to the realities of present-day suburban development in order that all income levels of American families may be properly housed.

"This industry is keenly aware of the problems ahead, not only for builders but for communities and home buying families. These are problems for all Americans everywhere. The builders of America pledge themselvs to work in cooperation with all concerned individuals, community groups and local officials—throughout the United States so that we may achieve for all the sound and balanced development which our communities must have."

We believe this statement means what it says and demonstrates the awareness of the home building industry of its responsible role in the community.

The background of this apparent controversy has been presented at length in order to clarify an unfortunate happening occasioned by a person no longer connected with the AMA, and because ULI is convinced that the problems attending zoning, subdivision regulations and the provision of community facilities can be solved best by cooperation and an exchange of views rather than by invective. We have reason to believe that groundwork for the former has been laid.

As to the position of ULI, we have advocated, do now and will continue to support sound, realistic and progressive zoning and subdivision regulations as essential to the proper planning of our urban areas.

M.S.W.

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1955 CENSUS OF BUSINESS

In January, 1955 the Bureau of the Census, U.S. Department of Commerce, began taking the 1954 Censuses of Business, Manufactures and Mineral Industries. Establishments in your city engaged in retail, wholesale and service trades; in manufacturing, and in extraction of minerals will be asked to complete reports on their business activities during 1954.

This is the periodic 5-year business census for which Congress denied funds in 1953, the year that would have been consistent with the census interval. While the Census Bureau collects the data for which its various censuses and surveys are designed, and compares them with data collected for other periods, it leaves the work of interpreting these data to others. Up-to-date, reliable statistics are necessary to detect trends, appraise markets, and adjust methods. The accuracy of the tools compiled by the Census depends on the accuracy of the reports submitted by each businessman. Therefore it is important that the distributed forms be completed accurately and returned promptly so that the new census facts can be available shortly.

NEW OFFICERS AND TRUSTEES OF U.L.I.

Warren L. Morris of Cleveland, Ohio, was elected President of the Urban Land Institute at the annual meeting of the Board of Trustees in Washington, D. C., January 30.

Mr. Morris heads the nationally known firm of Ostendorf-Morris of Cleveland, which specializes in the fields of commercial and industrial appraisal, management, and real estate. He is also president of the Cleveland Real Property Inventory and a past president of the American Institute of Real Estate Appraisers.

Elected as Vice Presidents were Clarence M. Turley, president of Clarence M. Turley, Inc. of St. Louis; and Joseph W. Lund, vice president of R. M. Bradley & Co. of Boston. Mr. Turley, an authority on office building management and appraisal, is a past president of the National Association of Building Owners and Managers, a member of Civic Progress, Inc. of St. Louis, and lecturer on real estate at Washington University. Mr. Lund is a past president of the National Association of Real Estate Boards and is associated with the Suffolk Savings Bank of Boston and the Boston Five-Cent Savings Bank. He served as a Coast Guard Commander during World War II. New U.L.I. Secretary is Paul L. McCord of Indianapolis, who heads his own firm in industrial real estate and is president of the Indianapolis Redevelopment Commission, the pioneer agency in this field. L. D. McKendry, vice president of the Chicago Title & Trust Company of Chicago, was re-elected Treasurer.

Warren L. Morris

Re-elected as Trustees for a three-year term were Boyd T. Barnard, president, Jackson-Cross Company, Philadelphia; Dr. Ernest M. Fisher, director, Institute for Urban Land Use and Housing Studies, Columbia University, New York; Robert P. Gerholz, president, Gerholz Community Homes, Inc., Flint, Michigan; Charles E. Joern, president, Wm. Joern & Sons, La Grange Park, Illinois; Joseph W. Lund, vice president, R. M. Bradley & Co., Inc., Boston; Glenn McHugh, vice president, The Equitable Life Assurance Society of the U.S., New York; Maurice G. Read, president, Mason-McDuffie Co., Berkeley, California; John McC. Mowbray, president, The Roland Park Realty Company, Baltimore; John C. Taylor, chairman of the board, J. C. Nichols Co., Kansas City; H. Gifford Till, director, Industrial Research & Development Department, Missouri-Kansas-Texas Lines, Dallas; Clarence M. Turley, president, Clarence M. Turley, Inc., St. Louis; and F. Poche Waguespack, Waguespack Pratt Co., New Orleans.

PERIMETER PLAN FOR ENGLEWOOD PLAZA

In ULI's Technical Bulletin No. 22, the authors first set forth the how and the wherefore of a Perimeter Plan as a way to rehabilitate older satellite shopping districts. This later report is the detailed application of such plan to the existing Englewood shopping area at W. 63rd and S. Halsted Streets in Chicago. The authors of the plan, Richard Lawrence Nelson and Frederick T. Aschman, as reported in *The American City*, would accomplish the district's physical renovation in the following steps:

(1) Construct the Traffic Perimeter: A one-way traffic street or "circle" encompassing the district, using existing streets so far as possible.

(2) Route all cars and trucks onto the Traffic Perimeter: This would send traffic around the district, by-passing traffic and providing easy access to parking for the shopping motorist.

(3) Route mass transit vehicles through the center: This enables shoppers to use mass transit to reach the center.

(4) Acquire and clear all residential buildings and any other non-conforming or blighted structures inside the Perimeter: A mixture of housing and commercial structures has a detrimental effect on both. Houses within the Perimeter are dilapidated or substandard or blighted by their poor location. All such uses interfere with the function of shopping and would not be found in a new shopping center.

(5) Eliminate all local streets inside the Perimeter: These will no longer be needed.

(6) Provide parking and service facilities on cleared land and vacated street areas: All such facilities would then have better accessibility from the Perimeter.

(7) Narrow the street pavement through the heart of the District (now possible to call a Center): This would provide one lane each way for streetcars or buses. The strip of land thus gained would be combined with existing sidewalks to create a pleasant pedestrian concourse, with possibilities for protection from weather and for attractive planting and landscaping within the Center. Low chain-link fences would protect pedestrians from transit movement but there would be openings at designated stops and pedestrian crossing points.

(8) Remodel the rear of the commercial buildings: It would be possible thus to present an attractive facade to parkers and motorists while increasing service and pedestrian access efficiency.

(9) Remodel buildings for simple, coordinated architectural treatment throughout the District. With comparatively minor alterations, exteriors can have the attractive appearance and architectural flavor of a new modern shopping center.

(10) Provide a cooperative organization of business and land interests inside the Center to coordinate the maintenance and continued improvement and architectural treatment of the area.

The merchants in Englewood Plaza have formed a new organization for effectuating the Plan.

CENSUS IMPROVEMENTS NEEDED FOR URBAN RESEARCH

by

Henry Cohen, Senior Management Consultant, Division of Administration, Office of the Mayor, New York City

Growing Recognition of the Urban Problem

A Congressional proposal that received some national newspaper attention was Congressman J. Arthur Younger's (Rep.—California) bill introduced last year to set up a new Department of Urbiculture with a secretary of cabinet rank. Mr. Younger is quoted as saying, "About 75% of the people in the United States live in the cities. Problems such as slums, dope, juvenile delinquency, housing, and smog are problems originating in the city. And they are national problems." Many will say that a development of this sort is already long overdue.

Over the past forty years, a Federal awareness of urban problems has been developing. A large body of statistical information has helped to foster awareness of the urban problem; and this awareness has, in turn, led to new concepts, new approaches, and new data to keep up with this burgeoning giant of urbanism.

Statistical programs in the Census Bureau, the Bureau of Public Roads, and other portions of the Commerce Department, the Labor Department, and even the Federal Bureau of Investigation (crime statistics) have often related to the needs of the urban population and the urban economy. Urban renewal, highway, and certain health and welfare programs indicate the growing recognition of the urban problem as a national problem.

The former National Resources Planning Board was perhaps the Federal body most instrumental in defining the critical role that cities play in the national economy. Had it continued in existence, we would today be developing clearer programs—including statistical ones—than we are. The Housing and Home Finance Agency has attempted to fill the vacuum that exists in the urban field, but significant as are some of its accomplishments, its scope is too narrow to fulfill the the full role of a Department of Urbiculture or Urban Affairs. Many foreign nations have cabinet-rank departments concerned with housing and urban affairs. Included among such countries are Great Britain, Sweden, Denmark, France, Burma, India, and Holland.

In any event, urbanism in the United States first made the grade, statistically speaking, about the end of World War I when the nation's population crossed the 50% mark from rural to urban. In 1950, 63.7% of the nation's population resided in urban areas.

It is no secret that we city slickers often feel that we are being taken by the State and Federal legislatures. Since legislative representation is usually apportioned not only on the basis of people, but also on the basis of spatial jurisdictions frequently devoid of any population concentrations, it is no wonder that urban populations are often outvoted in the legislatures by their less numerous country brothers.

However, when the history and evolution of our governmental structure is reviewed, with particular reference to the establishment of major cabinet-rank departments, we see how slow—and understandably so—the country has been in according full recognition to major functions.

President Washington managed with only four cabinet officers, the Secretaries of State, Treasury and War, and the Attorney-General. The latter served as a cabinet member though he headed no major department; the Department of Justice was not created until 1870. In 1798, the Navy was recognized. Though the Postal Service did not receive executive status until 1872, the first Postmaster-General participated in the Cabinet in 1829. The Department of the Interior, which is charged with responsibility over territories and possessions, Indian Affairs, Mines, etc., was not created until 1849, 46 years after the Louisiana Purchase. The agricultural function was not fully accorded recognition as an executive department until 1889, though it was first set up in 1862, twenty-seven years earlier. The Commerce and Labor Department was established in 1903; in 1913 the labor functions were separated out and given executive status. This culminated a 39-year process in which Labor was first a bureau, then an independent department without executive rank, and later a bureau again. In 1947, after 21 years of growth and pressure, the Air Force was established as an autonomous arm of the Armed Forces, though it did not attain cabinet rank. Finally, it took twenty years of New Deal and Fair Deal governmental philosophy and programs before the Department of Health, Education, and Welfare was established in 1953.

Urban indignation against discrimination runs deep, though most often very little is done about it. In New York City, every few years an ambitious aspirant for public office can get a 24 point headline by calling for the establishment of New York City and its 8,100,000 people as the forty-ninth state. To my knowledge, no one has yet been elected to office with that as a major plank. However, the Younger proposal is more serious, and if the Congressman would agree to changing his terminology from "Urbiculture" to something like "Urban Affairs", he would have a good chance of success.

The Role of Cities in the National Economy

That cities are a vital aspect of a modern, technologically-advanced and complexly-organized society is generally recognized. However, one of the dimensions of urban life which has been largely ignored and neglected is its physical and spatial basis.

Municipal administration generally has reflected the lack of basic systematic approaches to organizing the physical shape of the city. The huge gaps in urban statistics, particularly in data covering the physical land use structure, results from our failure as a society to grapple with our urban problems in an organized fashion. Without a fuller body of data than we have, it is difficult to define in detail the problems with which we must deal if our cities are to continue to function. This is particularly true in the new field of urban renewal programs.

American cities—with residential and non-residential blight, traffic and parking problems, smoke, soot and smog—are the end result of a hundred years of relatively uncontrolled growth. The delusion that an accumu-

lation of individual decisions would result in fair, beautiful, and smoothly organized cities is now fully exploded, though too few see it for the myth that it is. Most municipal governments have organized their capital expenditure programs mainly in response to current demand factors rather than in relation to a comprehensively conceived city plan towards which individual investors and the community as a whole could work.

Unfortunately, the paucity of crucial economic data for urban areas makes it difficult to show the full economic stake which the nation has in its cities. Neither wealth nor income statistics are available for urban areas. Of the various series on construction expenditure, only the "valuation of building construction authorized" is available for urban areas, and this series certainly understates the expenditures undertaken.

Though annual estimates are available for farm real estate assets, none is available for urban real estate assets. Attempts to improve census compilations of assessed valuations for cities have been frustrated by the Congressional economy drive.

Of an estimated $797 billion national wealth in 1948, $487.4 billion or 61.2% was in real estate.[1] The farm portion of the real estate component is, significantly available, totalling $70.8 billion or 8.9% of the total wealth. In 1951, a year for which later estimates of national wealth are available[2], $506 billion was in non-farm real estate.[3] The greater part of non-farm real estate, perhaps as much as $400 billion, is in urban real estate.

For the 170 standard metropolitan areas, considerable information is available in the County and City Data Book, 1952. These 170 areas contain 84,715,244 people, representing 56.2% of the national total; they occupy 208,330 square miles, or 7.0% of the national area; they had a value added by manufactures in 1947 of $56.4 billion, or 75.5% of the national total; they had wholesale and retail sales in 1948 of $242.8 billion, or 76.1% of the national total; they had $6.6 billion in receipts in the service trades, or 77.1% of the national total. A crude effort to derive a percentage of the national income originating in these 170 areas sets it in a range of 65 to 70% for a total income of over $200 billion in 1953.

Furthermore, valuation of construction authorized in urban areas totalled $9.6 billion in 1953. This figure probably understates actual value expended.

The heavy spatial concentration of people, industry and commerce is even more graphically shown in the following data. The eighteen largest cities in the country, each with a half a million people or more, contained a total of 26,591,395 people in 1950, 17.6% of the nation's total population. These 18 cities covered a total area of only 2,253.7 square miles, .076% of the nation's total land area. The total farm population in 1950 was over a million less, 25,058,000 people, 16.6% of the nation's population. Total farm area was 1,810,259 square miles, 60.8% of the nation's land area. The urban population concentration of approximately 11,800 persons per square mile is 850 times greater than the average farm density of 13.8 persons per square mile. New York City's density of 25,054 persons per square mile was almost 2,000 times greater than average farm density. The organization and management of activities which are so heavily concentrated in small areas is an undertaking of the greatest difficulty. This planning and management task can hardly be handled satisfactorily without detailed data showing the characteristics, intensity and location of the varied activities and functions.

Parenthetically, the general lack of appreciation of urban spatial and locational factors is highlighted by Table 710 in the Statistical Abstract. After listing the acreage for five categories and four sub-categories of farmland, the following items with no sub-totals are included under the general heading "not in farm land: roads, railroads, cities, parks, ungrazed desert, and other wasteland". In no other table in the Statistical Abstract is there a single line giving total acreage for urban areas.

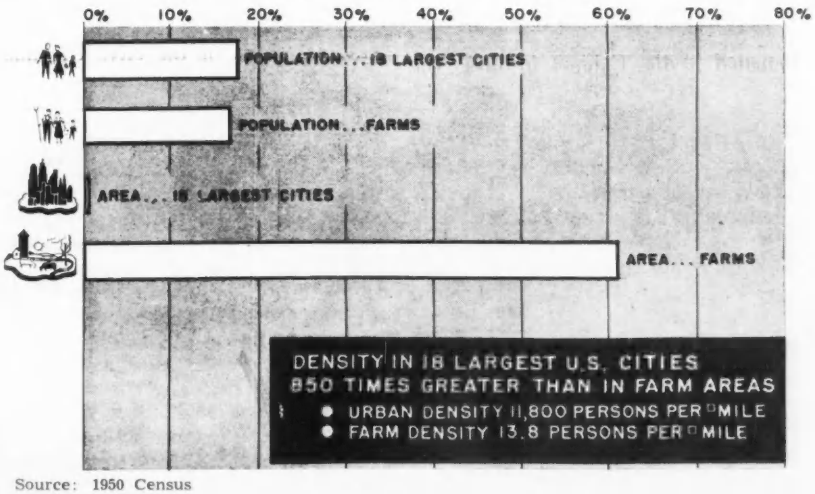
To summarize then, city planners, municipal officials, land developers, realtors, and others are concerned with the physical planning of communities mostly in metropolitan areas containing in excess of half of the nation's population, in which the real estate assets probably equal $400 billion, in which probably over $200 billion of the national income was produced in 1953, and in which over $9 billion was spent in 1953 on residential and non-residential construction. The task of city planning is to develop a physical environment which is healthful, and provides (a) for the social and community needs of the population, and (b) an efficient physical basis for the maintenance of a balanced local economy so that employment can be sustained, property values protected, and a contribution made to the national economy.

[1] Raymond W. Goldsmith, "A Perpetual Inventory of National Wealth", Studies in Income and Wealth, Vol. XIV, National Bureau of Economic Research, (New York, 1951), pp. 18-19.

[2] The United States News and World Report, August 8, 1953, p. 48.

[3] This figure contains certain types of real estate, such as outlying power generators, grain storage facilities, railroad rights-of-way, and real estate used in mining operations and forest land which are not generally regarded as urban real estate. Excluded from non-farm real estate are: 1) military and naval installations in urban areas, and 2) vacant urban land for which estimates are not available. Nor do these real estate value estimates include other types of investments in urban areas, such as inventories and producers' machinery and equipment.

POPULATION AND AREA AS A PERCENTAGE OF THE NATION



Source: 1950 Census

Statistical Needs for City Planning

For city planning and development purposes, a wide variety of data in the following groups is required: population; economics; land use; residential and non-residential structures; social, health, and welfare; fiscal and financial; transportation, roads, and utilities; facilities, including schools, hospitals, libraries, etc.

In discussing statistical needs, the emphasis is of necessity on requirements for new data, rather than on the valuable coverage already available. The census tract coverage of the population census, and the block coverage of the housing census are invaluable aids for city planning and marketing. Though there are many detailed improvements that could be made in these censuses, it has seemed to me that this presentation should, instead, stress needed reorientations based on a recognition of (a) the urban area's physical and spatial character, and (b) the fluidity and mobility which takes place in urban areas. This emphasis will not permit a rounded treatment of all the statistical needs but it will focus on some of the worst gaps.

Measures of The Urban Area's Physical and Spatial Character

The Housing Census represents a significant effort to compile physical data to describe the housing environment of the resident population. Better indicators are needed of housing quality, density and building coverage. Also needed is information on community facilities and improved enumeration and reporting on quasi-household accommodations. However, in the field of housing there is already a framework which, though subject to improvements, provides invaluable assistance to planners, housers, realtors, insurance companies, marketing officials, etc. No comparable "structural inventory" is available for business and industrial establishments.

Twenty years ago this summer, in the depth of the depression, some 5,000 relief workers were turned loose to take a real property inventory in New York City. A parallel effort was undertaken in many other cities. The real property inventory was divided into two parts, residential and non-residential. The non-residential portions included structural information, some of which was very valuable. The real property inventory was a gigantic effort in a vital field which has been greatly neglected since.

Business and industrial establishments have (a) physical characteristics, (b) are located in a physical environment, and (c) exist in a pattern of spatial relationships to their markets; their supply, servicing and financing sources, transportation, and competing establishments. These physical factors and relationships are important and measurable. The Watkins' Committee Report on the Appraisal of Census Programs, (see Urban Land Nov. 1954, p. 6) encouraging as it was in so many respects, fails to cover this extremely vital area. A man from Mars studying our society from Census sources would be impressed with the tremendous economic activity carried on by millions of people in a spatial setting that has no physical dimensions. He could not detect from census sources any of the remarkable physical changes that have occurred in technological processes, nor the changes in plant design that have resulted.

Need for Local Area Data

Without local area data, the appraisal of industrial and business movements, the changes in industrial and business composition, and the trends in space or structural requirements is made extremely difficult. The Censuses of Manufactures and Business cover statistics for all states, all counties and urban places (of 10,000 population and over) in each state, and all of the metropolitan districts in the United States. Thus, counties which contain separate urban places of 10,000 or more population receive separate reports for each of these urban places. Manhattan, which comprises the whole of New York County, with 1,954,000 population, and 2,466,000 workers employed[4] on the Island, is provided with no separate reporting for any of its economic districts such as the garment center, the port area, the commerical areas, etc. Fortunately, several New York newspapers raised the funds to purchase and publish some of the Retail Census for 116 Market areas within the City. However, no census tract code was provided for establishments in the Census of Manufactures, so that the costs of purchasing special tabulations on a locality basis were prohibitive. It now appears that no local area code will be provided in any of the Economic Censuses, including the Retail Census, which will be taken in 1955 covering the year 1954. Canada has been providing selected economic data on a census tract basis for its large cities without violating the disclosure rule set out to protect individual establishments. There is no reason why certain economic data cannot be provided for U. S. cities for groups of census tracts. It is of the utmost importance that provision be made in the forthcoming Censuses of Business and Manufactures for reporting on a locality basis in large urban centers. The most recent comprehensive inventory for most of the large cities dates back to 1934 when the Real Property Inventory was undertaken with Federal assistance. Tremendous changes have occurred in the last twenty years. It will be important that those who could use this information make known their needs.

Physical Characteristics and Requirements of Business and Industry

In planning for industry and business, provision must be made in the city plan for the future land requirements of these activities. Forecasting future industrial and business land requirements is based first on projections of business and industrial activity and employment for different types of establishments; secondly, projections of floor space requirements per employee for different types of establishments; and thirdly, projections of land requirements per employee or per unit floor space for different types of establishments. These characteristics vary by types of establishment and by location within the urban area.

A recent Philadelphia report[5] estimates after intensive study that the acreage requirements in industrial districts in 1980 will be 5,503 acres greater than in 1945, representing a 49.7% increase as compared to an estimated 13.4% decrease between 1943-1980 in manufacturing employment in these industrial districts. This represents an increase of 73% in the land requirements per employee over a 35-year period. These requirements for land will have to be satisfied within the framework of the city plan and the

[4] Estimated. Division of Research, Department of City Planning, 1950. This estimate is lower than the figure of 3,000,000 people that are estimated to enter lower Manhattan during the rush hours. The employment figure of 2,466,000 does not include self-employed, students, clientele, visitors, etc., which are included in the transportation estimate.

[5] Philadelphia City Planning Commission, "Industrial Land Use Plan" (1950).

zoning ordinance, so that Philadelphia may continue to offer suitable sites for industry. This type of analysis applies to business and commercial requirements and to other cities as well. Actual floor and land space used by establishments would be a valuable addition in the Censuses of Manufactures and Business.

Structural Characteristics of Non-residential Establishments

There are a number of structural characteristics which are important for industrial, commercial and city planning purposes. Recent Federal housing legislation recognizes the need to clear industrial and business slums. Age, structural condition, obsolescence, coverage, design, provision for parking and loading, fireproofing, and other factors will require identification in order to develop non-residential redevelopment and renewal programs. These factors are also important in developing performance standards in zoning.

Patterns and Relationships Among Establishments (Linkages)

Additional research is required for uncovering the relationships and linkages among various types of establishments. Some research already completed highlights the types of information which would be useful in analyzing linkages.

In a study of the Philadelphia Central District, Alderson and Sessions[6] used three ways of classifying establishments. The first is a division of all establishments into six basic land use types, e.g., retailing, manufacturing, wholesaling with stocks, wholesaling without stocks, business services, consumer services. The second method involves a grouping of the six classes into three functional area combinations, i.e., (i) manufacturing and wholesaling with stocks, (ii) business services and wholesaling without stocks, and (iii) retailing and consumer services. Classes in a single group tended to locate in the same general area. The third method regroups the original six classes into two broad groups that relate to the traffic generation characteristics of the six classes, i.e, (i) goods-handling establishments (retailing, manufacturing, and wholesaling with stocks), and (ii) non-goods-handling establishments (consumer services, business services, and wholesaling without stocks). Suitable statistical information derived for these different classes shows the locational tendencies, the space requirements, the ground floor space requirements, the traffic generating qualities, and the parking and loading requirements of the different types.

A different emphasis in analyzing linkages appears in an English Study of Birmingham and the Black Country.[7] Four types of linkage which tended to keep firms where they are, were defined. "(i) Industries performing a series of successive processes (vertical relation or linkage) . . . (ii) Industries serving a number of industries and having to be in continual contact with them (Diagonal relation or linkage) . . . (iii) Industries producing parts and accessories for an assembly industry, to the needs of which the design of the part has often to be adjusted experimentally. (The relation here is lateral—each part of the industry converging on its market, the assembly industry) . . . (iv) Industries using in common or diverging from certain processes, services or skills, provided locally and not elsewhere to any extent". This latter classification shows the need for improved data on industrial processes.

Data Requirements for Zoning

Recent trends in zoning show an increasing concern with two general methods of regulating use: (a) the establishment of permissive use groups which list specific land uses which shall be permitted; and (b) the designation of performance standards which shall be met by permitted uses.

a. Permissive Use Groups

Several years ago, a zoning consulting firm in preparing a proposed zoning resolution for New York City, classified all land uses, subject to zoning and known to exist in New York, into eighteen groups of generally compatible uses. "Each group contains uses which either are smilar in terms of types of activities performed; or which represent services performed for the same group of users or which depend on similar materials, processes or means of transportation. Other factors, such as size of the operation, sometimes enter into the classification."[8]

Zoning use groups are based on lists of products and processes. Where nuisance factors may be an important controlling consideration, the emphasis is likely to be on the process. As an illustration, the description of permitted manufacturing uses in a residental area employs the following language in the New York proposal, "Use Group 14 includes those office, laboratory, and manufacturing *uses* which, when subject to adequate controls over *bulk* and landscaping, are appropriate in certain locations in low-density *residential* areas, provided that: 1. Such uses do not create any danger to health and safety in the surrounding areas; 2. Such uses do not create any offensive noise, vibration, smoke, dust, odors, heat, glare or other objectionable influences, and 3. Whatever merchandise is received and shipped has a high value in relation to its size and weight, so that very little trucking traffic will be generated."[9]

This material, which is only a small part of an extensive listing, focuses on several important considerations.

i. An attempt should be made over a period of time to work out a Standard Industrial Classification covering products, processes, and uses which can be used for city planning and zoning classifications.

ii. If this were done, then reporting of pertinent information on a local area basis could provide data for improved diagnosis of physical and economic problems in local areas; improved local planning and zoning; and measuring the progress being made over a period of time in a local area's physical and economic character.

b. Performance Standards

The excerpt quoted above, defining use group 14, refers generally to nuisance factors, such as "danger to health and safety", "offensive noise, vibration, smoke dust, odors, heat, glare or other objectional influences." Significant research is already underway designed to develop quantitative measures of the general qualities enumerated above. Six national organizations of planners, industrial Realtors, and civil engineers

[6] Alderson and Sessions, "Philadelphia Central District Study" (1951).

[7] West Midland Group, "Conurbation" London (1948), pp. 131-2.

[8] Harrison, Ballard, & Allen, "Plan for Rezoning the City of New York" (New York, 1950) p. 43. ibid, p. 178.

[9] The following specific uses are permitted:
A. Offices, business, professional, and governmental
B. Laboratories, research, experimental, and testing
C. Light non-nuisance manufacturing, limited to the following processes and products:
Art needle work, handweaving and tapestries
Books, and handbinding and tooling
Jewelry, manufacture, from precious metals
Medical, dental and drafting instruments
Motion picture producing
Optical goods and equipment, watches, clocks and other similar precision instruments.

have formed a National Industrial Zoning Committee to guide work on this problem. This is not the time to elaborate on the progress of this research, but it bears watching for the improvements it may offer in the censuses of business and industrial establishments.

Measures of Fluidity and Mobility

Most of our bench mark statistics are static; they are descriptive of specific characteristics which exist at, or immediately precede, the period of enumeration. In the population census we are provided with some dynamic indicators, e.g., migration status, state or country of birth. In the other major censuses, there are no important dynamic indicators, e.g., place of work data of resident population, annual physical volume of goods received and goods shipped, and migration status information for business and manufacturing establishments.

By fluidity, I mean those recurring daily movements which are reflected in traffic and transit patterns, such as the journey to work, and the regular intra-urban movement of goods. By mobility, I mean those movements by which basic locations are changed or transferred for longer periods of time and which are reflected in intra- and inter-urban migration of people and establishments.

Fluidity Data

Journey to work. The daily journey to work in New York City, involving the movement of an estimated 3,000,000 persons into lower Manhattan, is, despite its hazards, symbolic of man's great ability to organize his environment. So delicate is the balance by which this organization is achieved, that we dread any intrusions, such as strikes, storms, or accidents, that may disorganize this regular flow of persons. While we may marvel at the technological achievement, we also sometimes wonder (a) whether it can be sustained, (b) whether it should be sustained, or (c) whether in the continued effort to raise the working man's level of living, an annual average of 480 hours or the equivalent of 60 work days or twelve work weeks spent in routine transit is particularly productive—socially, culturally, or economically. Yet this activity, in which so many people spend so much time, is an uncovered area in statistical enumeration and reporting.

In the New York Metropolitan Area, transit and highway construction programs which will cost several billion dollars are currently under construction, approved, or under active consideration; yet no comprehensive origin and destination studies are available.[10] While valuable data can be compiled from traffic counts, toll station counts, transit station counts, railroad commuter passenger counts, thorough analyses are difficult to prepare without comprehensive bench mark data covering work locations as related to residence, means of travel, time of travel, etc.

Indicators of traffic generation. In addition to data on number of employees by establishment, we require information on (i) average daily number of "Consumers" or "Customers" who come to the establishment to transact business, (ii) average daily physical volume of goods received and shipped. In addition, we require (iii) by building or lot the average daily number of vehicles parked or vehicles loading. A recent study prepared with the assistance of the Bureau of Public Roads focuses on many of the difficulties in the development of such statistics.[11]

Mobility Data

One of the defects in the migration status information in the population census is that the period is too restricted, and that it provides information only for migration into a county or tract, but no data on movements out of a county or tract. Admittedly this latter indicator would be difficult to develop, but it certainly is needed, even if on sample basis. Furthermore, we in New York City would welcome the provision for reporting inter-county movements within the city as distinct from inter-county movements which begin or end outside the city. At the present we have no way of knowing, for example, what proportion of moves in 1949 into Queens occurred from the other four counties in New York City or from elsewhere in the State. Certainly that should be a relatively simple matter to work out.

At the present time, analyses of industrial and business movements are difficult to prepare because of a paucity of data. One can infer from observing gains and losses by industry groups in different counties what has taken place. Would it not, however, be appropriate to ask establishments in a quinquennial business and industry census whether they moved in the preceding five year interval and where they moved from? Such information by type of establishment and local area would be invaluable in appraising the economic trends in a community.

Conclusions

Much of the data requirements which I have discussed cannot be easily obtained by the Federal census unless local data sources are better organized than they are. It is not my intention to place the full burden of these data gaps on the Census Bureau. Many municipalities are far behind the Federal Government as far as their statistical programs are concerned. Many of the items referred to are already available in one form or another in municipal operating departments, such as Tax Departments, Building Departments, Boards of Assessors, Traffic Departments, etc. However, too often the data are not so organized that they can be made available to other users of data. Unless municipalities put their statistical house in order, it would be difficult for the Census Bureau to undertake many of the compilations requested.

The City of New York, assisted by a grant from the Russell Sage Foundation, has set up a "Committee on the Statistical Program for New York City", with Dr. Allen Manvel, as Director. This local appraisal will, we hope, lead to improvements in New York City's statistical programs. One of the by-products of this work should be the availability and broader use of statistics that are already being collected or that can be collected with small changes in present procedures or questions.

Improvements in statistical programs on the Federal and local level will have to go hand in hand. Census Bureau appropriations have not kept pace with enlarging urban needs. The Watkins Committee has recommended two quinquennial Agricultural Censuses at an estimated cost of $46,000,000 per decade. The estimated cost of the Census of Manufactures projected for a decade ranges from $10,600,000 to $15,100,000. The Census of Business is projected at an estimated cost of $18,000,000. This suggests an inbalance which continues to govern consideration of statistical programs at the expense of urban areas. If we are to get local area reporting and some of the additional data we need, then we will have to move out more boldly for larger appropriations. The cities are awakening to their needs. The Federal statistical program will have to keep pace.

[10] The Port of New York Authority and the Triborough Bridge and Tunnel of Authority have undertaken a joint review the need for (a) additional crossing over the Hudson River, and (b) a connection between Brooklyn and Staten Island. The review is not expected to cover mass transit requirements.

[11] URBAN TRAFFIC. A FUNCTION OF LAND USE. By Robert B. Mitchell and Chester Rapkin. Columbia University Press.